

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: HALO

Report Number: P645629

Luminaire Tested: LCR621WW9FSE020-23W-2700K

Issue Date: 3/14/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P645629  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-759-73)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/14/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: LCR621WW9FSE020-23W-2700K  
Description: LCR 6 Wall Wash  
Light Source: 2700K CCT, 93 CRI LEDS  
Ballast/Driver: -

**Summary**

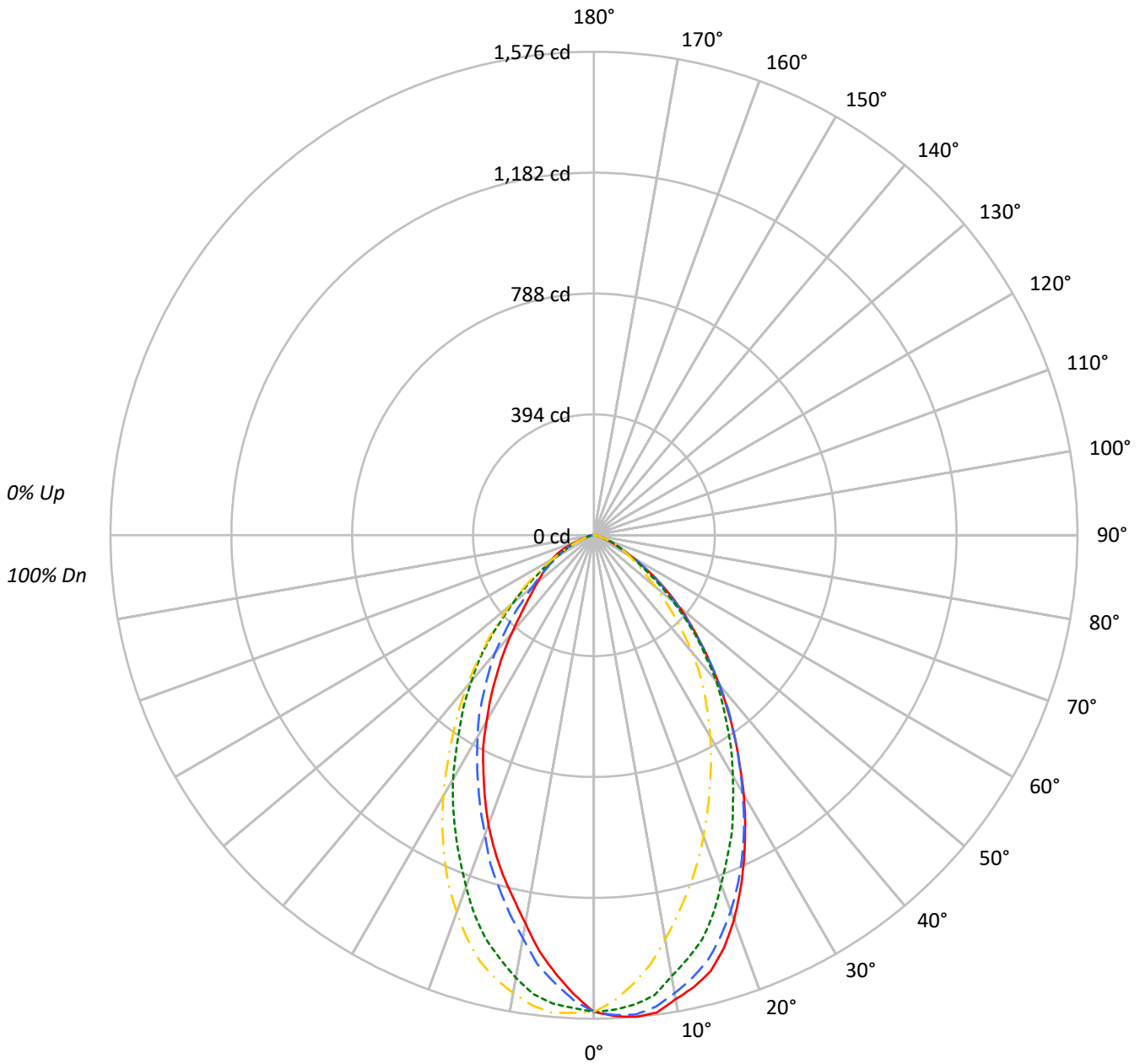
Lumens per Lamp: N/A  
Luminaire Lumens: 2095.0 lumens  
Efficiency: N/A  
Efficacy: 93.5 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 0.95 / 1  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 22.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot



— 0°-180°    - - - 45°-225°    ···· 90°-270°    - · - · 135°-315°



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20			
RC	80				70				50				30				10		0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	92	90	
2	104	98	93	88	102	96	91	87	93	89	85	90	86	84	87	84	82	82	80	
3	97	89	83	78	95	87	82	77	85	80	76	82	78	74	80	76	73	73	71	
4	91	81	74	69	89	80	73	68	78	72	67	75	70	67	73	69	66	66	64	
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59	59	58	
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	54	52	
7	74	63	56	50	73	62	55	50	61	55	50	59	54	50	58	53	49	49	48	
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	45	44	
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	42	40	
10	62	51	44	39	61	50	44	39	49	43	39	48	43	39	48	43	39	39	37	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	85180	85180	85180	85180
5°	86716	84509	78885	84349
10°	85486	81233	71503	81550
15°	83468	77401	65040	77288
20°	77835	70700	58665	71091
25°	70069	64407	51529	64582
30°	61845	57313	44254	58155
35°	53364	50554	36814	51002
40°	45313	44355	29863	44426
45°	37833	36950	24065	37461
50°	30865	28912	20605	29483
55°	23636	20998	18618	21629
60°	16336	15076	17279	15284
65°	10779	11272	15242	11648
70°	7341	8415	8880	8880
75°	4850	5465	5465	5867
80°	4514	4830	4830	5114
85°	3585	4214	4214	4780

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 292.5°

Vertical Angle: 45°

Luminance: 38647 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.2	6.8
10°-20°	369.6	17.6
20°-30°	470.7	22.5
30°-40°	447.1	21.3
40°-50°	335.8	16.0
50°-60°	198.6	9.5
60°-70°	93.0	4.4
70°-80°	30.5	1.5
80°-90°	7.6	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	982.5	46.9
0°-40°	1429.6	68.2
0°-60°	1963.9	93.7
0°-90°	2095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2095.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1554	1554	1554	1554	1554	
5°	1576	1536	1434	1533	1576	149
15°	1471	1364	1146	1362	1471	410
25°	1158	1065	852	1068	1158	531
35°	797	755	550	762	797	498
45°	488	477	310	483	488	378
55°	247	220	195	226	247	222
65°	83	87	118	90	83	87
75°	23	26	26	28	23	27
85°	6	7	7	8	6	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	1553.8	1553.8	1553.8	1553.8	1553.8	1553.8	1553.8	1553.8	1553.8	1553.8	1553.8
2.5°	1569.1	1568.1	1565.3	1558.6	1548.1	1534.7	1518.5	1506.1	1497.5	1504.1	1516.6
5°	1575.8	1574.8	1568.1	1554.8	1535.7	1505.1	1467.9	1445.9	1433.5	1440.2	1465.0
7.5°	1569.1	1564.3	1550.0	1536.6	1511.8	1464.0	1410.6	1380.9	1366.6	1378.1	1410.6
10°	1535.7	1530.9	1515.6	1495.5	1459.3	1395.3	1338.0	1299.8	1284.5	1302.6	1333.2
12.5°	1508.0	1499.4	1478.4	1451.6	1413.4	1333.2	1264.4	1225.3	1211.9	1223.4	1264.4
15°	1470.7	1460.2	1434.4	1405.8	1363.8	1269.2	1193.8	1157.5	1146.0	1159.4	1191.9
17.5°	1409.6	1403.9	1372.4	1340.8	1293.1	1193.8	1120.2	1084.9	1076.3	1085.8	1123.1
20°	1334.2	1331.3	1303.6	1257.7	1211.9	1115.5	1042.9	1009.4	1005.6	1012.3	1038.1
22.5°	1248.2	1250.1	1228.1	1179.4	1135.5	1040.0	968.4	935.9	927.3	933.0	965.5
25°	1158.4	1163.2	1145.1	1101.1	1064.8	961.7	894.8	861.4	851.9	865.2	892.9
27.5°	1067.7	1075.3	1059.1	1020.0	981.8	891.0	826.1	790.7	782.2	793.6	825.1
30°	977.0	984.6	968.4	940.7	905.4	818.4	758.3	718.2	699.1	722.9	758.3
32.5°	883.4	894.8	881.5	861.4	833.7	746.8	690.5	646.5	624.6	648.5	696.2
35°	797.4	807.9	799.3	783.1	755.4	680.9	626.5	572.1	550.1	579.7	624.6
37.5°	714.3	723.9	721.0	710.5	685.7	618.8	564.4	509.0	484.2	513.8	563.5
40°	633.2	641.8	637.9	635.1	619.8	552.0	496.6	440.3	417.3	446.0	503.3
42.5°	558.7	564.4	558.7	559.6	541.5	485.1	429.8	383.0	356.2	382.0	431.7
45°	488.0	491.8	483.2	489.9	476.6	418.3	367.7	324.7	310.4	325.7	374.4
47.5°	423.1	425.0	417.3	416.4	404.0	353.4	310.4	276.0	271.2	280.8	310.4
50°	361.9	363.9	354.3	349.5	339.0	296.1	261.7	241.6	241.6	244.5	261.7
52.5°	302.7	305.6	295.1	289.4	277.9	242.6	217.7	212.0	215.8	213.9	222.5
55°	247.3	247.3	242.6	234.9	219.7	195.8	182.4	186.2	194.8	189.1	188.1
57.5°	193.9	193.9	192.0	185.3	174.8	159.5	156.6	166.2	175.7	167.1	159.5
60°	149.0	153.8	150.9	145.2	137.5	130.8	131.8	145.2	157.6	147.1	132.7
62.5°	110.8	114.6	115.6	111.7	107.9	107.0	108.9	125.1	138.5	126.1	112.7
65°	83.1	84.0	87.9	86.0	86.9	86.9	88.8	103.1	117.5	105.1	89.8
67.5°	62.1	64.9	65.9	66.9	68.8	69.7	69.7	77.4	88.8	81.2	71.6
70°	45.8	46.8	47.8	50.6	52.5	53.5	52.5	56.3	55.4	57.3	54.4
72.5°	32.5	33.4	33.4	35.3	37.2	37.2	38.2	38.2	38.2	39.2	39.2
75°	22.9	23.9	23.9	24.8	25.8	24.8	24.8	25.8	25.8	25.8	25.8
77.5°	18.1	19.1	19.1	19.1	20.1	20.1	20.1	20.1	20.1	21.0	21.0
80°	14.3	14.3	14.3	14.3	15.3	15.3	15.3	15.3	15.3	15.3	16.2
82.5°	9.6	10.5	9.6	10.5	10.5	10.5	10.5	10.5	11.5	11.5	11.5
85°	5.7	5.7	5.7	5.7	6.7	5.7	6.7	6.7	6.7	6.7	6.7
87.5°	2.9	2.9	1.9	1.9	2.9	1.9	2.9	2.9	2.9	2.9	3.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	1553.8	1553.8	1553.8	1553.8	1553.8	1553.8
2.5°	1529.0	1542.3	1550.9	1558.6	1563.4	1569.1
5°	1503.2	1532.8	1550.9	1562.4	1568.1	1575.8
7.5°	1460.2	1508.9	1533.7	1545.2	1557.6	1569.1
10°	1396.2	1465.0	1496.5	1515.6	1529.0	1535.7
12.5°	1330.3	1414.4	1453.5	1480.3	1499.4	1508.0
15°	1266.3	1361.8	1406.7	1437.3	1459.3	1470.7
17.5°	1194.7	1296.0	1339.9	1376.2	1403.9	1409.6
20°	1114.5	1218.6	1264.4	1308.4	1331.3	1334.2
22.5°	1038.1	1142.2	1182.3	1235.8	1252.0	1248.2
25°	963.6	1067.7	1110.7	1154.6	1165.1	1158.4
27.5°	893.9	994.2	1029.5	1069.6	1075.3	1067.7
30°	823.2	918.7	952.1	981.8	986.5	977.0
32.5°	753.5	835.6	873.8	891.0	896.8	883.4
35°	687.6	762.1	793.6	805.1	807.9	797.4
37.5°	624.6	694.3	721.0	725.8	724.9	714.3
40°	557.7	620.8	646.5	644.6	642.7	633.2
42.5°	490.9	555.8	570.1	567.3	565.4	558.7
45°	425.9	483.2	498.5	493.7	492.8	488.0
47.5°	361.9	406.8	426.9	425.0	425.9	423.1
50°	302.7	345.7	358.1	361.0	363.9	361.9
52.5°	251.2	285.5	297.0	301.8	305.6	302.7
55°	200.6	226.3	241.6	246.4	250.2	247.3
57.5°	166.2	181.5	192.0	196.7	198.6	193.9
60°	135.6	139.4	150.9	154.7	153.8	149.0
62.5°	110.8	112.7	116.5	119.4	116.5	110.8
65°	91.7	89.8	89.8	90.7	86.9	83.1
67.5°	73.5	70.7	70.7	68.8	64.9	62.1
70°	56.3	55.4	53.5	50.6	47.8	45.8
72.5°	41.1	40.1	38.2	35.3	34.4	32.5
75°	26.7	27.7	25.8	24.8	23.9	22.9
77.5°	21.0	22.0	21.0	20.1	19.1	18.1
80°	16.2	16.2	16.2	15.3	14.3	14.3
82.5°	11.5	11.5	11.5	10.5	10.5	9.6
85°	7.6	7.6	7.6	6.7	6.7	5.7
87.5°	3.8	3.8	2.9	2.9	2.9	2.9
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)